

Claims

1. A method for the preparation of sodium percarbonate granules having enhanced stability, comprising modifying the surface of the sodium percarbonate granules by means of a surface reaction between sodium percarbonate and carbon dioxide or bicarbonate species to form a dense solid film of essentially sodium bicarbonate on the surface of the sodium percarbonate granules, **characterized** in that

5 a) carbon dioxide is dissolved in water to form an aqueous solution containing dissolved carbon dioxide and bicarbonate,

10 b) the surface of the sodium percarbonate granules is exposed to a spray of said aqueous solution containing dissolved carbon dioxide and bicarbonate, to form said solid film of essentially sodium bicarbonate, and subsequently

15 c) the residual fluid is removed from the surface.

2. A method according to claim 1, **characterized** in that the carbon dioxide is dissolved in water in a two-way nozzle to form the spray of said aqueous solution containing dissolved carbon dioxide.

15 3. A method according to claim 1, **characterized** in that the carbon dioxide is dissolved in water in a premixing tank.

20 4. A method according to claim 1, **characterized** in that the carbon dioxide is dissolved in water inside a guiding line tube wherein the carbon dioxide gas and water are injected.

25 5. A method according to any of claims 1 to 4, **characterized** in that the content of carbon dioxide in the aqueous solution to be sprayed is at least 0.25% by weight.

6. A method according to any of claims 1 to 5, **characterized** in that the surface of the sodium percarbonate granules is exposed to said spray for a period of from 0.5 to 15 minutes.

25 7. A method according to any of claims 1 to 6, **characterized** in that the thickness of said film is less than 100 nm.

30 8. A method according to any of claims 1 to 7, **characterized** in that the method additionally comprises repeating steps a) to c) from one to ten times to increase the thickness of the film by creating multiple layers.

9. A method according to any of claims 1 to 8, **characterized** in that the method is carried out in a fluidized bed reactor comprising a step of spraying said aqueous solution containing dissolved carbon dioxide inside the fluidized bed from a spray nozzle inside the fluidized bed reactor.

5 10. A method according to any of claims 1 to 9, **characterized** in that the method additionally comprises depositing an additional coating layer on top of said film of sodium bicarbonate, said additional coating layer comprising sodium sulphate, soda, sodium bicarbonate, a mixture of sodium sulphate and lithium sulphate, a mixture of soda and sodium sulphate, a mixture of a metal sulphate and a polymer or a
10 polymer.

11. Sodium percarbonate granules prepared according to the method of any of claims 1 to 10.

12. Use of sodium percarbonate granules of claim 11 in detergents, especially in detergents containing zeolite.